Make: it

Soldering Starter Kit

6400245 **User's Guide**

We hope you enjoy your Soldering Starter kit from RadioShack. Please read this user's guide before using your new soldering kit.

Soldering

Soldering Iron and Holder
Compact design soldering iron with heat-dissipating holder securely holds the soldering iron at a convenient angle.

Spare Soldering Tips (4)

Rosin Core Solder

Desoldering

Desoldering Vacuum Pump

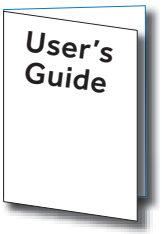
2mm Solder Wick

Tools

Helping Hands with Magnifying Glass
Magnifies small objects and holds them securely.

4.5" Mini Diagonal Pliers

Reamer Tool
Fork Tool
Chip Tool
Hook Needle Tool
Knife/Scraping Tool
Stainless-Steel Brass Brush Tool



User's Guide

Caution: The solder contained in this kit contains lead. Thoroughly wash your hands after soldering and before consuming food.

Specifications

Output Power..... 48W
Input Voltage .....120V AC, 60Hz, 0.5A
Temperature Control ..... Up to 842°F (450°C)
Soldering Tips .....Copper, nickel-plated
Cord Length..... 3.6 ft (1.1m)

Specifications are subject to change and improvement without notice. Actual product may vary from the images found in this document.

Important Safety Instructions

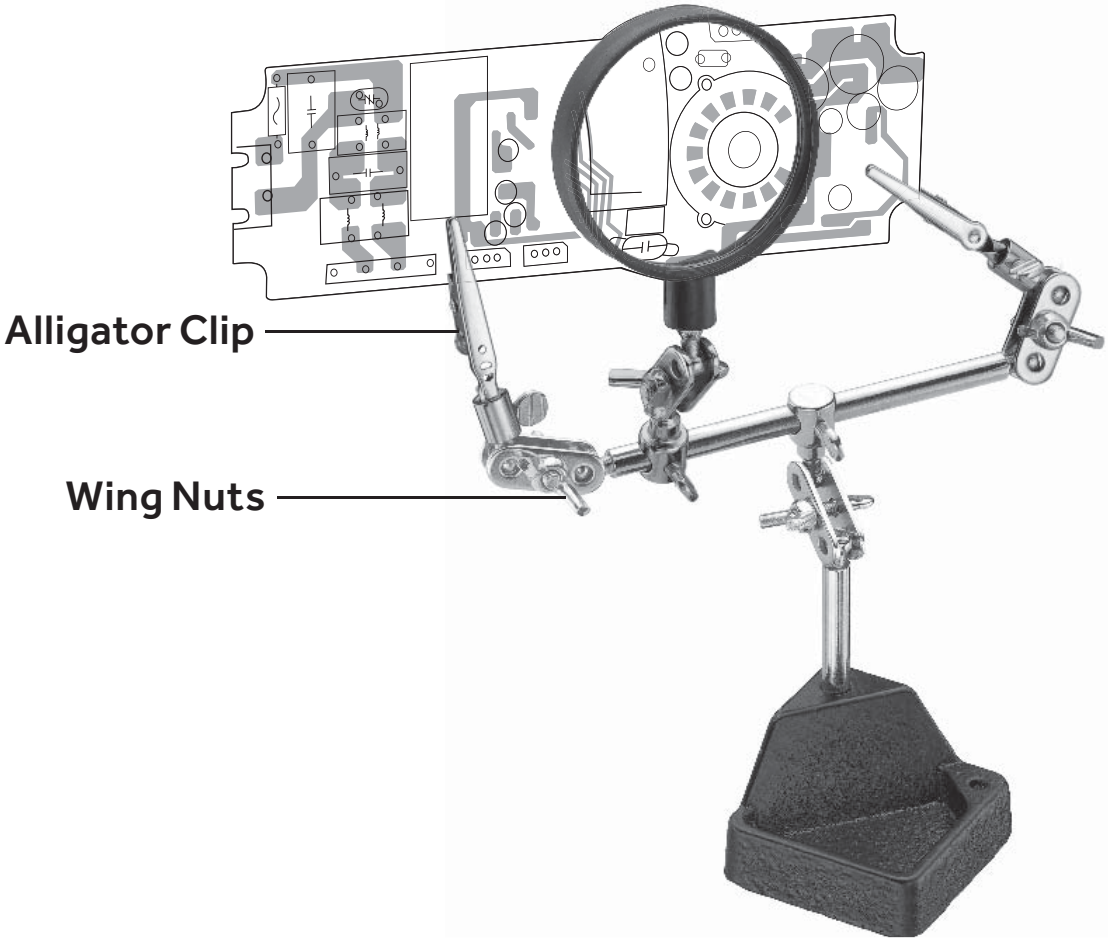
- Read instructions before operating the product.
- Keep out of the reach of children.
- Work only in a dry area, away from flammable materials.
- Operate the soldering iron in properly ventilated rooms or rooms with a fume extraction system. Inhalation of soldering fumes and particles from flux in the solder is detrimental to health.
- Be careful! Hot soldering irons can cause severe burns and ignite fires. Do not touch the tip and the heat sink plate or let it come in contact with any other material.
- Do not attempt to touch the tip of a hot soldering iron or remove solder from its surface with your hands.
- If the supplied cable is damaged, it should be repaired by the manufacturer or its agent or a suitable qualified person in order to avoid a hazard.
- Never hold the soldering tip to the soldering point too long. This can destroy the soldering point.
- Never operate the soldering iron without the soldering tip. This can damage the heating device.
- When you are not using your soldering iron, be sure to turn it **OFF**.
- Store the soldering iron in a dry, secure place where children cannot reach it.
- Keep the soldering iron away from dust and dirt, and clean it with a damp cloth occasionally to keep it looking new.
- This product, when used for soldering and similar applications, produces chemicals known to the State of California to cause cancer and birth defects (or other reproductive harm).

Setting Up Your Soldering Iron

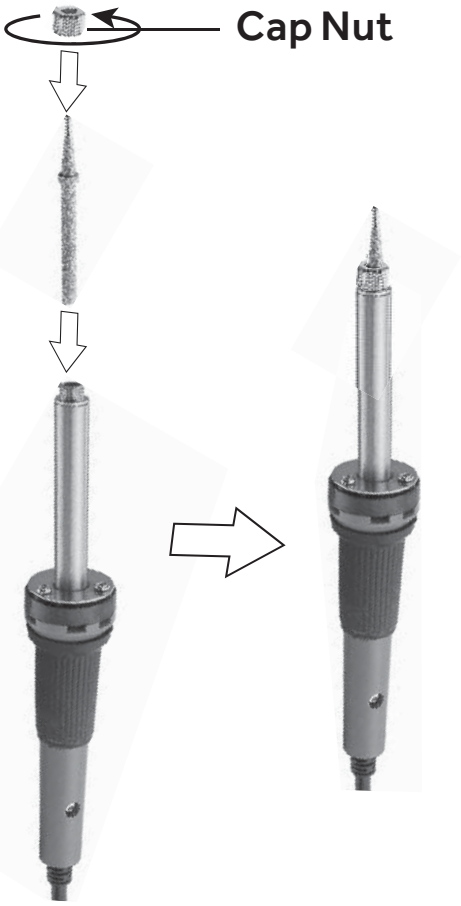
1. Insert the soldering iron holder into the slot on the stand.
2. Place the iron in the holder.
3. Place the cleaning sponge into the stand. When you're ready to use the iron, add water to the sponge.
4. Plug the power cord into a grounded AC outlet.

Setting Up Your Helping Hands

Alligator clips hold your project in place, and the magnifying glass lets you see small items up close. Wing nuts let you adjust the angles.



Replace the Tips



1. Turn off the iron and allow it to cool.
2. Remove the cap nut and tip and clear out any dust. Do not get dust in your eyes.
3. Insert the new tip and tighten the cap nut securely. To avoid damage, do not over-tighten.
4. If loosening occurs when the iron is hot, use pliers to tighten the cap nut.

Tin the Soldering Iron Tip

"Tinning" means coating the soldering iron tip with a small amount of solder.

1. Wait about one minute after plugging in and turning on the soldering iron, then clean the tip by quickly wiping it on the damp cleaning sponge. This will remove impurities and oxides from the tip.
2. Tin the soldering tip by adding a small amount of solder.
3. When the tip becomes discolored, wipe it across the damp cleaning sponge, then tin it again.

Soldering

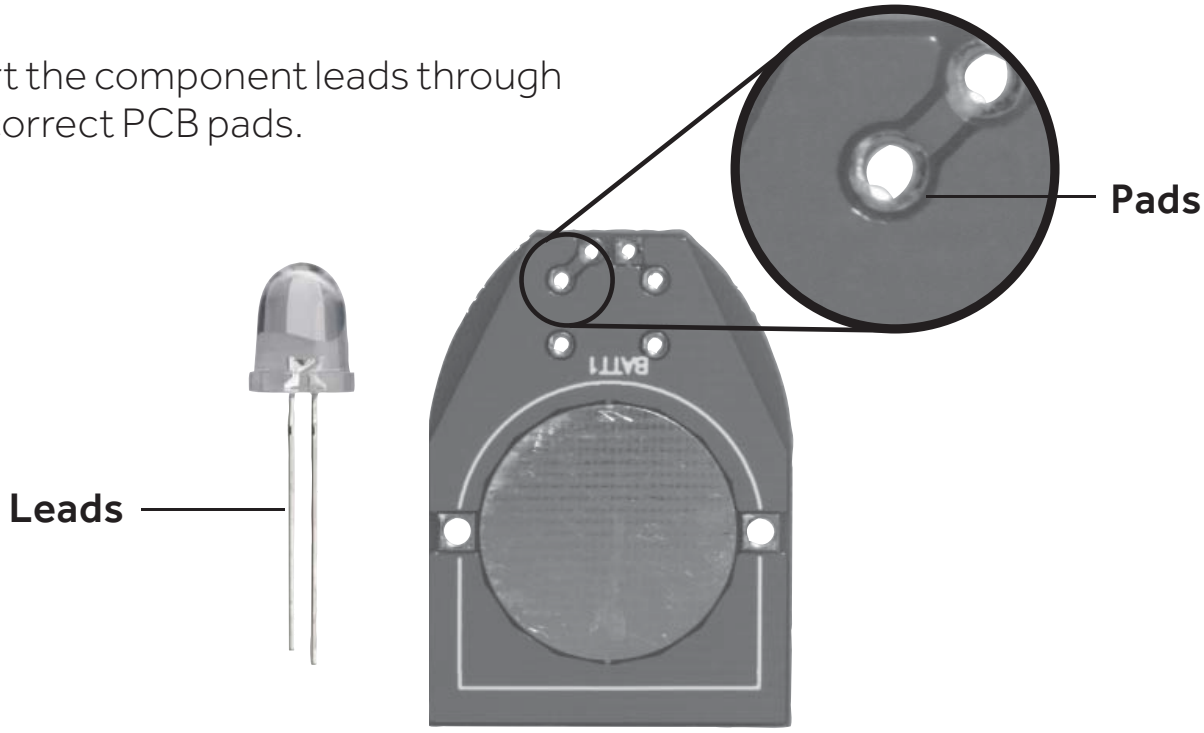
Some projects include a printed circuit board (PCB), or you can use a standard PCB. Typically, if the board has printing to identify the components, insert the component on the side with the printing and solder on the other side.

While learning to solder, avoid surface-mount soldering, which requires more experience.

Tip: It takes practice to solder electronic components quickly and properly. Before you start an important project, try to solder several practice joints.

1. Turn on the soldering iron and set the desired temperature based on different soldering conditions, such as type of solder, size of solder pad or component, etc.

2. Insert the component leads through the correct PCB pads.

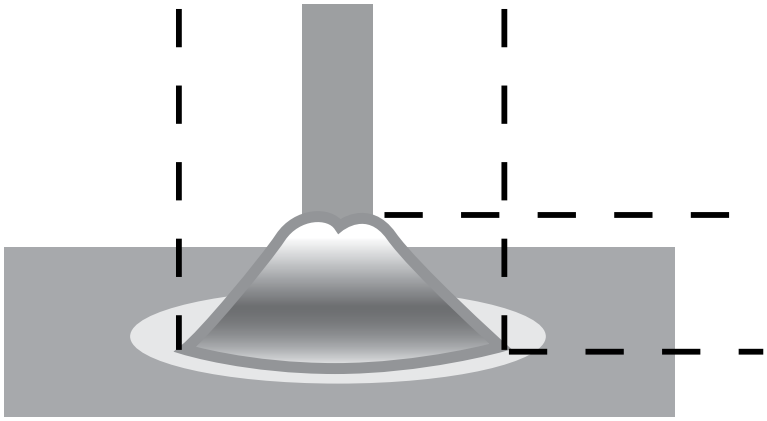


3. Press the soldering iron to the pad where the lead emerges. Heat the pad for one second.

4. Do not move the iron. Instead, move the solder to touch the point where the pad and lead meet. Do not touch the solder to the iron.

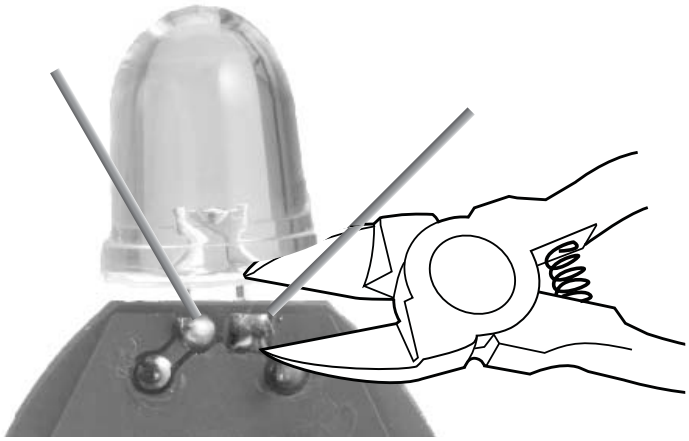
5. Pull back the solder before you remove the iron.

Flow enough solder to hold the component; solder should not extend beyond the pad and should extend only slightly above the pad.



6. Trim the excess lead as closely as possible to the PCB.

Caution: Be careful when soldering and trimming leads. Protective eyeware is recommended.



Turn off the soldering iron if not used for over 5 minutes. To protect your tools, do not keep the iron set at a high temperature for long periods of time.

Tin the iron again after use to prevent oxidation.

Desolder with the Desoldering Pump

Bridge

A **bridge** forms if solder flows over the board, connecting two pads that should not be connected.

1. Hold the desoldering tool firmly and push the plunger down until it clicks.

2. Reheat the bridge until it becomes liquid.

3. Hold the pump to the melted solder and press the trigger button.

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2

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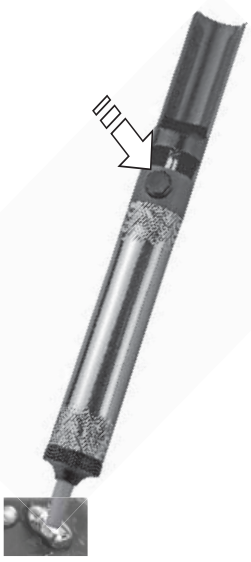


Note: To extend the life of the tip, press it lightly to the work area.

4. Push the plunger down again to eject the solder into a metal, glass or ceramic receptacle. Do not reuse this solder.

Caution:

- Always keep the tip end of tool away from your face.
- Never point the tool at another person.
- Do not let ejected solder fall onto PCBs or other wiring, as this may cause a short circuit.

Desolder with the Solder Wick

1. Unspool several inches of solder wick.

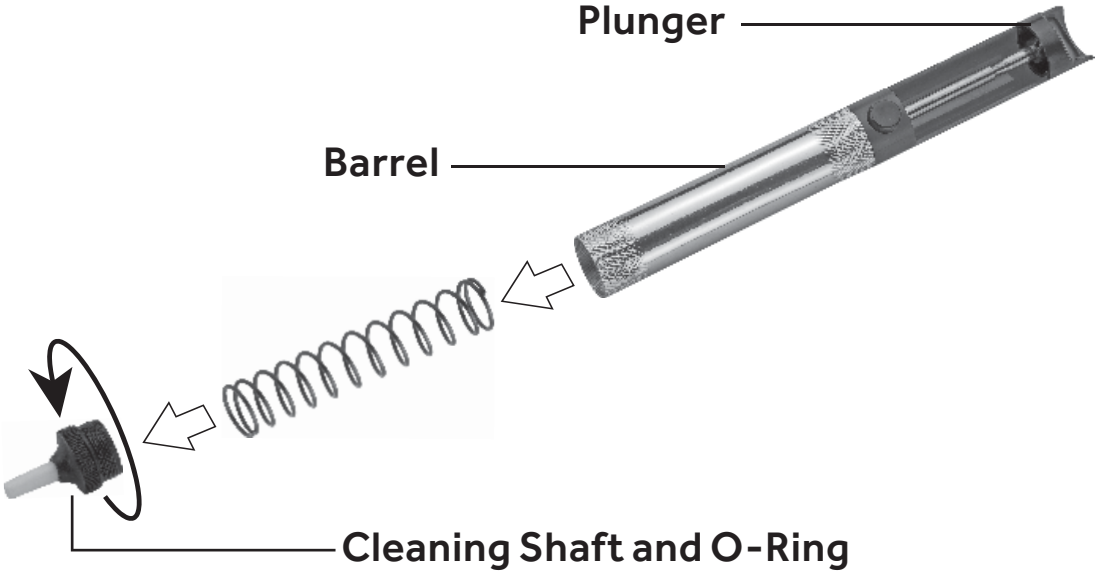
2. Place the end of your solder wick directly on the solder.

Caution: The solder wick becomes very hot during desoldering. Do NOT hold the solder wick directly with your fingers. Use pliers or hold the solder wick by its plastic case.

3. Press the iron on top of the solder wick. When the solder melts, the solder wick will soak up the excess.

Clean the Desoldering Pump

After use, thoroughly clean the pump's plunger, cleaning shaft, O-ring, and barrel. Remove the tip and barrel, and then coat the O-ring and cleaning shaft with petroleum jelly lubricant. Do not use solvents or heat.



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